The Effects of Money Priming on Support of Government Programmes

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A thesis submitted in partial fulfilment of the requirements for the Degree of

Master of Science in Psychology

at the University of Canterbury

by Violet Gaffikin

University of Canterbury 2015

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Acknowledgements

I would like to thank my two supervisors, Dr. Zhe Chen and Professor Simon Kemp, for their valuable knowledge, mentoring and guidance in this study over the past year.

Abstract

Money helps people gain access to the goods and services they require and it allows people to make choices without having dependence on others (Boucher & Kofos, 2012). Prior research has shown that when the concept of money is activated, participants behave in a less pro-social but a more self-sufficient way in that while they are less likely to offer help to others or to donate money, they make more effort to complete a task and they prefer to work alone rather than to work collectively with others (Vohs, Mead & Goode, 2006). In this study, we examined the effect of money activation on the level of support for government goods and services programmes as a function of the type of programmes (welfare related or universal) and the participant's socioeconomic position (higher or lower). All participants performed a memory task before completing a government goods and services survey. The memory task consisted of either money-related words (for the money primed group) or neutral words not associated with money (for the control group). The results show that relative to the participants in the control group, those primed with money had lower levels of support for government programmes, and the effect was stronger for welfare related compared with universal programmes. No significant interaction between priming and socioeconomic status was found, although there was a trend that activating the concept of money had a larger effect for the higher socioeconomic group compared with the lower socioeconomic group. These results provided converging evidence to previous research that activating the concept of money could change people's attitudes and behaviours, inducing them to become less sensitive to others' needs. Our results also extend the findings of prior research to the valuation of existing government programmes. They suggest that money activation could lower people's support for social policies, resulting in unintended consequences.

The Effects of Money Priming on Support of Government Programmes

Money is viewed as both the greatest good and evil, based on the goods and services which can be acquired with it but also the lengths that people are willing to go to get it (Vohs, Mead & Goode, 2006). Lea and Webley (2006) investigated the psychology of money and from this drew on the human use of money as a motivating substance, similar to the effects of biological drug. They argue that humans have a strong natural motivation to obtain money to survive in a society which is overwhelmingly based on money swapped for goods and services. Furthermore, money can act as an incentive and reinforcer, changing people's behaviour towards other humans based on their intention to acquire money and competition for the associated status.

Money as both a positive and a negative tool

Whether money is good or bad can depend on whether it is for the personal self or for the interpersonal self (Vohs, Mead, & Goode, 2008). Having more money has been shown to increase positive emotions and protect people from the negative events as it allows them to have more control of the situation whereas lack of money may increase negative emotions, depression, and physical health (Price, Choi & Vinokur, 2002). Money has also been shown to increase motivation, self-confidence and perseverance (Boucher & Kofos, 2012). However, in the attempt to acquire money, people may act in their self interest and decrease social cooperation with others (Mogilner, 2010). When money causes this state of self-sufficiency, people prefer to act alone instead of depending on others and not wanting others depend on them (Vohs et al., 2006).

Money and financial systems are a main concept in today's modern Western societies (Mishra, Mishra & Nayakankuppum, 2006). It has three basic functions: as a medium of exchange, a unit of account, and a store of value (Mishkin, 1992). In addition, it has psychological and behavioural consequences (Lett, 2013). Every day, most people earn, spend, save or lose money from trading of goods and services (Hansen, Kutzner & Wanke, 2013). Money impacts social relationships due to the status of power that can arise from having it or the dependence on others that occurs from not having it. Money can cause large disagreements between people over perceived inequality or fairness (Lea & Webley, 2006). Human beings depend on each other to exist; relying on others to gain the items they want and need. Due to this reliance, there is a need for social acceptance within a group in order for this dependence to survive. Having money decreases this dependence on others, allowing the individual to gain what they want without the need for others. Vohs et al., (2006) found that activating the concept of money changes people; more precisely, money can change people's motivations and in turn, this can influence their social behaviours towards others by increasing self-efficacy and decreasing the dependence on interpersonal relationships.

Lea and Webley (2006) explained human motivation for money in terms of two theories: "The Tool Theory" and "The Drug Theory". The Tool Theory refers to humans using money as a metaphorical tool for being a means to an end. Money is a tool in the sense that it helps people acquire what they want or need, because it can be exchanged in return for goods or services. The Drug Theory emphasizes the motivational aspect of money. Like drugs, money can be a strong motivator, and it can have addictive consequences. In line with the drug theory, Zhou, Vohs and Baumeister (2009) found that activating the concept of money increased their

participants' tolerance of physical pain and lessened the distress caused by social rejection. Likewise, experiencing social rejection and physical pain increased the desire for money.

The self-sufficiency model

One of the most influential models in psychology that has been proposed to explain the effect of money on people's behaviours is the self-sufficiency model (Vohs et al., 2006). According to this model, the activation of the concept of money induces people to focus attention on the needs or desires of themselves rather than on other people. This gives rise to an insulated state where they increase effort to attain personal benefits and separate themselves socially to achieve them. When motivated by their own self-interest, people tend to perceive others as threats, and this motivates them to separate themselves from others in order to attain their personal goals.

In a series of experiments, Vohs et al., (2006) used a priming technique (e.g., by asking participants to do a sentence descrambling task that involved money related words) to activate the concept of money in their participants to examine whether money would lead to people choosing to work alone and/or separate themselves from others in order to gain personal achievement in a given task. They found that their participants' desire to work with a peer and willingness to offer assistance were negatively affected by being primed with money concepts. In addition, money primed participants were more independent in their tasks and were less sensitive towards helping others if they were not to be rewarded for doing so. Vohs et al. (2006) also tested their findings using play money placed in the visual periphery of the participants instead of actual money, and found the same results. These findings suggest that simply activating the concept of money can change people's views and associated behaviours, and that priming participants with the concept of money has

the same effects on people and their feelings of self-sufficiency as physical money often brings. The reminder of money can cause people to prefer to act alone to attain personal goals rather than to work in a team to achieve team goals. Similar results were reported by Vohs et al. (2008), where reminders of money prompted the participants to work harder but they also became less helpful towards others and preferred working independently compared to their non money-primed peers. These results lend support to the self-sufficiency model proposed by Vohs et al. (2006).

Pfeffer and DeVoe (2008) investigated the effect of money priming on peoples' attitudes about volunteering. The researchers showed that when no incentive was offered the students who were primed with money concepts were less willing to volunteer their time and offered shorter time periods than their peers who were not primed with money. In addition, when the participants were reminded about the use of their time in terms of the economic value, they were more likely to make decisions about the use of their time based on the compensation they would receive rather than on the potential benefits for others.

Interestingly, whilst this increase in self-interest from money priming has negative effects like decreased socialisation in a group and lower willingness to help others, it can help with increasing self-control amongst consumers by regulating their choices, making them more likely to make decisions based on usefulness rather than on emotion (Tong, Zheng & Zhao, 2013). Evidence for increasing self-control was also reported by Boucher and Kofos (2012) and Muraven and Slessareva (2003). Boucher and Kofos found that reminders of money buffered the ego depletion effect in tasks that required self-control. Ego depletion is the idea that when self-control is required, it draws on a limited pool of mental resources that can be used up, resulting in poorer performance in subsequent tasks that also require self-control (Baumeister,

Bratslavsky, Muraven & Tice, 1998). Boucher and Kofos found that thinking about money was enough to make the participants feel efficacious, capable, and confident. Money buffered the physical and mental pain and this made them more likely to persevere longer in difficult tasks, resulting in better performance (Boucher & Kofos, 2012). This result is similar to the findings from Muraven and Slessareva (2003), who showed that fatigued participants were able to continue on difficult self-control tasks longer when they were shown cash rewards compared to their counterparts who were not shown the same rewards. Based on their finding, the researchers suggested that having a monetary incentive could increase motivation to persevere longer as it would compensate for the other difficulties such as physical pain and fatigue.

In line with the finding of Muraven and Slessareva (2003), Zhou et al., (2009) showed that exposure to money related stimuli reduced distress over social exclusion and decreased the physical pain of having bodily contact with hot water. Meanwhile, being reminded of spending money increased participants feelings of social distress and physical pain. More recently, Gueguen and Jacob (2013) extended previous research from laboratories to the real world by looked at social and solitary behaviours around money within a natural context. They found that people who had contact with money after using an ATM were less likely to help someone afterwards, suggesting that the contact with money may have activated feelings of self-sufficiency which decreased the participants' desire for social interaction.

Socioeconomic positions within a society

Socioeconomic position refers to the position individuals hold within the structure of a society (Lynch & Kaplan, 2000). Variations in socioeconomic position can be caused by a wide range of factors such as resources, behaviours, attitudes and education. The differences in socioeconomic position within a society can lead to

differences in level of wellbeing within a population (Salmond, Crampton, King & Waldegrave, 2006). These differences are associated with large inequalities within education, income, employment levels and health status (Salmond et al., 2006). People place a lot of importance on money as access to it allows them to achieve goals without requiring the aid of others (Vohs et al., 2006).

Due to the differences in socioeconomic position amongst individuals in a community, some assistance is required to help those who are struggling. Welfare-related support is available in New Zealand to those who are in need. The New Zealand government has a number of support programmes in place to lessen the effect of socioeconomic status on health, living conditions and general wellbeing. These are programmes such as the Domestic Purposes Benefit, Independent Youth Benefit, Sickness Benefit, Invalids Benefits, among others (Salmond et. al., 2006). These support programmes are generally most beneficial for those in the lower socioeconomic groups. Given the nature of these programmes, it is expected that support for these programmes is higher from the people in lower socioeconomic groups than in higher socioeconomic groups. The latter may not be eligible for any of the extra assistance.

In terms of the effect of money on attitudes and/or behaviours, although reminders of the concept of money have some beneficial effects on individuals, in a social setting it leads to support of systems which increase social inequality. For example, Caruso, Vohs, Baxter and Waytz (2013) showed that exposure to money increased people's support for the U.S. social system, which encourages social inequality within a community. Despite participants claiming that they would like to have less inequality in the society, when reminders of money were given to these participants, they increased their endorsement for the free-market principles, even

though free-market capitalism favours the wealthy rather than the poor. In addition, when the participants were primed with money and were asked to rate a list of personal values, they placed more emphasis on power and less on universal equality. These results were consistent with the philosophy of Social Darwinism, which is the idea that there is always going to be some social groups which are more successful than others because certain social group are perceived as not being as 'good' and that having inequality between those in lower and higher socioeconomic positions are naturally occurring within a society (Pratto, Sidanius, Stallworth & Malle, 1994).

It is not surprising that an individual's socioeconomic position and the amount of money they possess can have an effect on how they behave. Gino and Pierce (2009) investigated whether the presence of excessive wealth in a situation would lead to feelings of envy, which would then encourage unethical behaviour for personal gain. They found that when people were given the opportunity to compare their financial situation to the abundant wealth shown to them, envy and perceptions of inequity increased, driving up motivation to act for themselves rather than for others. In a culture where acquisition of money can influence a person's level of living, people are strongly motivated to obtain money for their personal benefit (Lea & Webley, 2006), because money is widely regarded as indicating that one has status, power, freedom and confidence (Hansen et al., 2013). When asked what the causes for wealth and poverty were, participants tend to associate wealth with having talents, working hard, taking risks, having perseverance and initiative. In contrast, poverty is typically linked to negative characteristics such as lack of education, laziness and lack of character (Smith & Stone, 1989).

The Present Study

Similar to the 2006 study by Vohs et al., the present study looks at whether participants' attitudes will be affected when the concept of money is activated. Specifically, it investigated whether people who were reminded of money would show less support towards the goods and services provided by the New Zealand government, especially those goods and services provided for the less fortunate (i.e., welfare programs such as unemployment benefit and disability allowance) rather than those provided for everyone (i.e., universal programs such as education and water distribution). Also of interest were whether the effect of money would differ between the participants with lower socio-economic status and those with higher socio-economic status, and whether socio-economic position would interact with the type of programmes.

Priming is both a technique and an effect. When it is a technique, it refers to the use of perceptual stimuli or tasks in an experiment to activate certain concepts or specific responses with the goal to influence participants' performance. When it is an effect, it refers to the phenomenon that occurs when exposure to one stimulus or perceptual event can influence a person's response to another stimulus or perceptual event (Gasiorowska, Zaleskiewicz & Wygrab, 2011). Priming is an implicit memory effect which occurs when the stimulus exposure activates some association within an individual's memory (Tong et al., 2013), and this in turn can change a person's feelings, decisions, opinions and actions, sometimes in positive ways and sometimes in negative ways (Gino & Pierce, 2009).

The current study in this thesis uses a memory recognition task involving money related words to prime participants although previous research has also used real money, play money, pictures of money and the use of automated teller machines

as money based stimuli to prime participants. The latter methods have all yielded similar results despite the particular type of stimuli used.

There are four groups of participants in the present study: one money primed group with high socioeconomic status, one control group with high socioeconomic status, one money primed group with low socioeconomic status, and one control group with high socioeconomic status. The experiment consisted of three parts: a memory task, a government goods and services survey, and a survey on the participant's socioeconomic position (using the NZiDep scale). The entire experiment was completed online via the University of Canterbury Qualtrics Online Survey programme. The memory task was used as a primer for the survey question. Its function was to activate the concept of money in half the participants (the money primed group) and to activate whatever non-money related concepts in the rest (the control group). After the memory task, all the participants completed a government goods and services survey, rating on ten point likert scales what their opinion is on the programmes. At the end of the government goods and services survey, all participants completed the NZiDep index questionnaire (Salmond et al., 2006). The latter is used to identify a person's socioeconomic position based on income, goods use and dependence on support in a New Zealand based setting. Scores for all sections, time taken to complete the survey and a few demographic answers based on participants' age and gender were recorded.

Based on previous research, it was hypothesized that the participants in the money primed group would show less support for the government goods and services programmes than those in the control group. Because people in lower socioeconomic groups typically benefit more from these government programmes than those in higher socioeconomic groups, it was expected that the level of support would be

higher in the lower compared with the high socioeconomic group. Based on the prior research that priming encourages individuals to behave in a more self-interested manner, we hypothesized that the effect of priming would be stronger for the high socioeconomic group than for the low socioeconomic group, and for the welfare related questions than for the universal questions. So far as we know, no studies have examined the effect of money priming on the government goods and services programmes. So, the results of this study will not only extend the findings of previous research, it will also have implications for government agencies and policy makers when measuring people's support for social policies.

Method

Participants

160 participants aged over eighteen years old, who were not full time students, were recruited for this experiment (80 males, 80 females). To investigate any possible gender effects, numbers of male and female participants were recorded and kept as equal as possible amongst the groups. The participants were recruited from various sources, including workplaces and community groups. This was to ensure that the participants were of varying ages and had different socioeconomic positions. Participation in the study was anonymous and voluntary, with the participants given the opportunity to go into a prize draw for one of three $200 shopping vouchers as remuneration on completion. All participants were required to read an information sheet regarding what the experiment involved and agree to a consent form before taking part. The experiment was approved by the University of Canterbury Human Ethics Committee prior to participant recruitment.

Materials

The experiment was done online through a link to the University of Canterbury Qualtrics Online Survey Tool site on the participant's own or borrowed computer. The experiment consisted of three parts: a memory task, a government goods and services survey, and a survey on the participant's socioeconomic position using the NZiDep scale (Salmond, Crampton, King & Waldegrave, 2006). There were also two demographic questions at the end asking about the participant's gender and age group. The memory task and government goods and services survey consisted of questions created specifically for this study (as shown in Appendix A and B). The participants were randomly assigned to either the money primed or the control group.

All participants completed a government goods and services survey after completing the memory task. This survey asked them to rate their views of particular government goods and services on a ten-point likert scales (zero being that they think the good/service is not at all vital for the government to provide and ten being that they think the good/service is very important for the government to provide). Half of the questions concerned welfare programs and the other half about programs for everyone, as shown in Appendix B.

The participants were also required to complete the NZiDep questionnaire online after the completion of the government goods and services survey. This questionnaire, which consists of 8 questions, measures the degree of socioeconomic deprivation for individuals (Salmond et al., 2006) and is used as a simple tool to measure socioeconomic status in New Zealand. Questions were based on items such as use of welfare help, food deficiencies and unemployment status over the last 12 months. These questions are suitable for all adults regardless of gender, age or race (Salmond & Crampton, 2012).

Design and Procedure

There are three independent variables in this study. The first one was the type of priming that each participant received (whether it was money related or neutral), and this was a between-subjects variable. The second one was the socioeconomic status of the participants (whether they were in a relatively low socioeconomic group or a relatively high socioeconomic group). This was also a between-subjects variable. The third independent variable was the type of government programs (whether they were welfare-related or universal), and this was measured within subjects. The dependent variable for the government goods and services survey was the participants' ratings indicating their level of support for the various programmes.

The participants were randomly allocated into one of two groups on their recruitment, either the money primed group or the control group. They were asked to read the experiment information sheet and electronically consent to take part in the experiment. There were two different types of words in the memory task – one was money related and the other was neutral words. The type of words a participant saw was based on the group that each participant was allocated to. In the memory task, each participant was shown 36 sequentially presented words, with one word shown at a time on an otherwise blank screen for 0.3 seconds. The order of the words was randomly selected for each participant. For the money primed group, the words were money related (e.g., savings, pay, income). For the control group, they were neutral words that had nothing to do with money (e.g., coat, flower, rain) as specified in Appendix A. The memory test consisted of 30 individually presented words, with half of them previously shown in the memory task and the other half new ones. The task was to indicate whether the word was "old" or "new" by clicking the "Yes" (for "old") or "No" (for "new") button. The participants had to complete each question

before they were allowed to move on to the next screen. They were instructed to respond as quickly and as accurately as possible.

All participants then completed a government goods and services survey. They indicated their level of support for each programme on a ten-point likert scale by clicking the number on the scale which best matched their view. A zero score indicated very low support with a score of 10 indicating very high support. The goods and services were either welfare related or universally beneficial. Questions were presented in a randomly assorted order for each participant to prevent any possible order effects.

The last part of the experiment involved the participants answering eight questions in the NZiDep questionnaire (Salmond et al., 2006) by selecting the "Yes" or "No" button to indicate the deprivations they had experienced in the past twelve months.

The participants were required to answer all the questions before they could move on to the next part of the survey. They were instructed to respond as accurately and as quickly as possible. The number of correct answers in the memory task, the time taken for to complete the entire survey, and the response to each question were all recorded. At the very end of the survey, the participants were asked to indicate their gender and the age group they belonged to for demographic purposes.

Results

In the money primed group, two participants' results were excluded from data analyses. One of these participants (female) took 19 minutes 4 seconds to complete the experiment, which was substantially longer than the average time taken by the other participants in this group at 5 minutes 48 seconds. Due to the long duration, any

potential priming effects would have dissipated. The other participant (male) was excluded because in each section of the survey, his answer was the same for every question. He presumably simply clicked the same button without giving the questions any thought.

To check for internal consistency among the questions in the government goods and services survey, two Cronbach's alphas were calculated, one for the 8 welfare related items and the other for the 8 universal questions. The results were 0.91 for the welfare questions, indicating acceptable internal consistency, and 0.65 for the universal questions, indicating a lower internal consistency.

The socioeconomic status of the participants was determined by counting the "Yes" responses in the NZiDep questionnaire. The higher socioeconomic group was classified as the individuals who indicated between 0 and 2 deprivations, with those indicated 3 or more deprivations being classified as the lower socioeconomic group (Salmond et al., 2006).

The results for the memory task and time taken to complete the survey are shown in Table 1. An analysis of variance showed no main effect of priming, $F(1, 154)$, $p = 0.40$, $\eta_p^2 = 0.005$, or socioeconomic status, $F(1, 154) = 2.28$, $p > 0.13$, $\eta_p^2 = 0.01$. However, there was a significant interaction between the two factors, $F(1, 154) = 48.91$, $p < 0.0001$, $\eta_p^2 = 0.24$. For the participants who saw money related words, those with a low socioeconomic position outperformed those with a high socioeconomic position. In contrast, for the participants who saw neutral words, those with a high socioeconomic position performed better than those with a low economic position.

Table 1

Mean Percentage of Correct Answer (with Standard Deviation) in the Memory Task and the Time Taken to Complete the Experiment as a Function of the Type of Priming and Socioeconomic Status

	Money Primed Low SES (n=39)	Money Primed High SES (n=39)	Money Primed (All) (n=78)	Control Low SES (n=38)	Control High SES (n=42)	Control (All) (n=80)
% Correct	83.33 (5.46)	73.33 (6.13)	78.33 (5.81)	76.49 (5.74)	86.67 (5.36)	81.58 (5.55)
Time Taken	6min10sec	5min 34sec	5min 48 sec	5min17 sec	6min 1 sec	5min 39sec

Visual inspection of the results of the government goods and services survey indicated different patterns of responses for the male and female participants. Consequently, the survey data are shown in two separate graphs (see Figures 1 and 2 for the female and male scores, respectively).

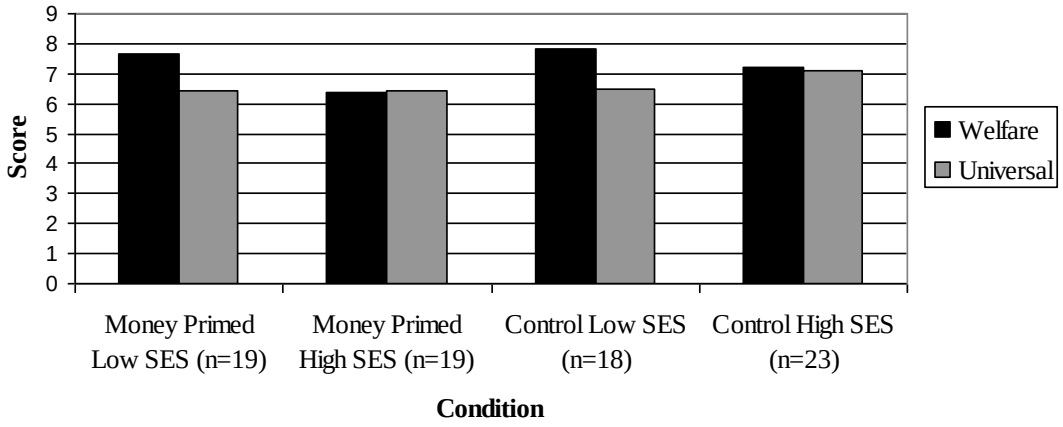

Figure 1. Mean scores of the female participants on the government goods and services survey, with higher scores indicating greater support.

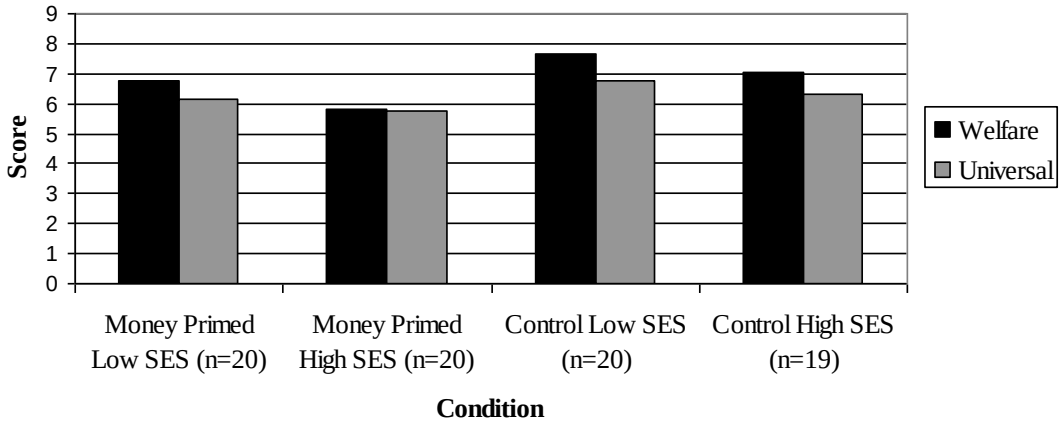

Figure 2. Mean scores of the male participants on the government goods and services survey, with higher scores indicating greater support.

The results were analysed using a 2x2x2x2 mixed analysis of variance (ANOVA), with priming, socioeconomic status, and gender as between-subjects variables and the type of survey questions as a within-subjects variable (see Table 2). A main effect of priming was found, $F(1, 150) = 20.83$, $p < 0.0001$, $\eta_p^2 = 0.12$. The participants primed with money (M = 6.41, SD = 1.12) reported less support for the government programmes than the control group (M = 7.06, SD = 0.98). The effect of socioeconomic status was significant, $F(1, 150) = 11.04$, $p < 0.01$, $\eta_p^2 = 0.07$, with those in the low socioeconomic group scoring higher support (M = 6.97, SD = 1.09) than those in the higher socioeconomic group (M = 6.51, SD = 1.05). The main effect of gender was also significant, $F(1, 150) = 7.05$, $p < 0.01$, $\eta_p^2 = 0.05$. The overall level of support was lower with males (M= 6.54, SD=0.94) compared with females (M = 6.92, SD = 1.14). There was also a main effect of the type of government programme questions, $F(1, 150) = 70.66$, $p < 0.01$, $\eta_p^2 = 0.32$. Across all groups,

there was a higher level of support for the welfare related questions (M=7.03, SD=1.23) than the universal questions (M=6.45, SD=0.97).

In addition to the main effects, there was a significant interaction between priming and the type of government programs, $F(1, 150) = 5.49$, $p < 0.05$, $\eta_p^2 = 0.04$, suggesting that the effect of priming was larger for the welfare related questions (the difference between the control and money primed group was 0.8) than for the universal questions (the difference between the control and money primed group was 0.5), although Tukeys HSD tests indicated that the effect of priming was significant in both cases ($p < .001$). The type of program also interacted with socio-economic status, $F(1, 150) = 35.76$, $p < 0.01$, $\eta_p^2 = 0.19$. This result indicated that the difference in support between the welfare and universal programmes was larger in the low socioeconomic group (a difference of 1.01) than in the high socioeconomic group (a difference of 0.17). Tukeys HSD tests further showed that whilst the level of support was higher for the welfare than the universal programmes in the low socioeconomic group ($p < .0001$), no such difference was found in the high socioeconomic group ($p = 0.32$).

A significant interaction between priming and socioeconomic status was not found, $F(1, 150) = 2.17$, $p = .14$, although numerically, the effect of priming was larger in the high than the low socioeconomic group. There were no other significant two-way interactions.

There was one significant 3-way interaction among the type of program, socio-economic status and gender, $F(1, 150) = 10.57$, $p = 0.001$, $\eta_p^2 = 0.07$. To clarify the 3-way interaction, two separate ANOVA were conducted, one on the data from the male participants (as shown in Table 3), and the other on the data from the female participants (as show in Table 4). For the male participants, all the main

effects were significant, $F(1, 75) = 21.81$, $p < 0.001$, $\eta_p^2 = 0.23$, for priming; $F(1, 75) = 10.60$, $p < 0.01$, $\eta_p^2 = 0.12$, for socioeconomic position, and $F(1, 75) = 30.42$, $p < 0.001$, $\eta_p^2 = 0.29$, for the type of government programmes. These results indicate that the support for the government programmes were stronger in the control group than in the money primed group, in the participants with a low than a high socioeconomic position, and for welfare related than universal programmes. In addition, priming interacted with the type of programme, $F(1, 75) = 5.17$, $p < 0.05$, $\eta_p^2 = 0.06$, suggesting the effect of priming was larger for the welfare programmes than for the universal programme. The interaction between socioeconomic position and the type of programme was marginally significant, $F(1, 75) = 3.78$, $p = 0.055$, $\eta_p^2 = 0.48$. This result indicates that there was a trend for stronger support for the welfare than the universal programmes in males with a low socioeconomic position, but not in those with a high socioeconomic position. No other effects reached significance.

For the female participants, there was also a significant main effect of priming, $F(1, 75) = 4.32$, $p < 0.05$, $\eta_p^2 = 0.05$, and a main effect of programme type, $F(1, 75) = 40.52$, $p < 0.001$, $\eta_p^2 = 0.33$. As with the male participants, the support for the government programmes was also stronger in the control group than in the money primed group, and when the programmes were welfare related than universal ones. In addition, the interaction between socioeconomic position and the type of programme was also significant, $F(1, 75) = 41.92$, $p < 0.001$, $\eta_p^2 = 0.36$. Whereas those with a high socioeconomic position showed comparable support for the welfare and universal programmes, those with a low socioeconomic position showed stronger support for the welfare than the universal programmes. No other effects were significant.

Table 2
*Repeated Measures 2x2x2x2 Analysis of Variance****

	Degrees of Freedom	F	p
Priming	**1**	**20.83**	**0.00001**
SES	**1**	**11.04**	**0.00112**
Gender	**1**	**7.05**	**0.00881**
Type	**1**	**70.67**	**0**
Priming*SES	1	2.17	0.143
Priming*Gender	1	1.79	0.183
Priming*Type	**1**	**5.495**	**0.0204**
SES*Gender	1	0.628	0.43
Type*SES	**1**	**35.76**	**0**
Type*Gender	1	0.449	0.504
Priming*SES*Gender	1	0.538	0.464
Type*Priming*SES	1	0.954	0.33
Type*SES*Gender	**1**	**10.57**	**0.0014**
Type*Priming*SES*Gender	1	0.161	0.689

** bold indicates a statistically significant result

Table 3
*Repeated Measures Analysis of Variance for Male Participants****

	Degrees of Freedom	F	p
Priming	**1**	**21.81**	**<0.001**
SES	**1**	**10.60**	**0.12**
Type	**1**	**30.42**	**<0.001**
Priming*Type	**1**	**5.167**	**0.026**
Priming*SES	1	0.34	0.56
Type*SES	1	3.78	0.06
Type*Priming*SES	1	0.96	0.33

** bold indicates a statistically significant result

Table 4
*Repeated Measures Analysis of Variance for Female Participants***

	Degrees of Freedom	F	p
Priming	**1**	**4.32**	**0.041**
SES	1	2.66	0.107
Type	**1**	**40.52**	**<0.001**
Priming*Type	1	1.11	0.296
Priming*SES	1	2.02	0.159
Type*SES	**1**	**41.92**	**<0.001**
Type*Priming*SES	1	0.16	0.688

** bold indicates a statistically significant result

Discussion

The experiment presented in this thesis investigated the effects of money priming on participants' support for government goods and services, and whether the magnitude of the priming effect would differ as a function of the participants' socioeconomic positions and the type of government programmes. The participants completed either a money related or neutral memory task, and then completed a government goods and services survey followed by the NZiDep questionnaire. The most important results are the finding that the participants who had been primed with money had a lower level of support for government programmes compared with those who had not been primed with money, and that the effect of priming was more pronounced when the programmes were "welfare" ones that benefit the poor, rather than the "universal" ones that benefit everyone equally. In addition to these results, the study also found, perhaps not surprisingly, that support for government goods and services was stronger among people with a lower than a higher socioeconomic status,

and among female than male participants. Furthermore, whereas the participants with a higher socioeconomic status showed little difference in their support between the type of government programmes, those with a lower socioeconomic status showed greater support for the welfare programmes than for the universal ones.

In the results of the memory task, there was a significant interaction between priming and socioeconomic position. In the money primed group, the participants with a low socioeconomic position outperformed those with a high socioeconomic position. In contrast, for the participants in the control group, those with a high socioeconomic position performed better than those with a low economic position. Interestingly, these results differ to those of Mani, Mullainathan, Shafir, & Zhao (2013) who found that poverty can decrease cognitive capacity. They gave participants hypothetical situations designed to trigger personal financial concerns. Participants then completed two cognitive based computer tasks. They found that thoughts about financial concerns reduced the cognitive performance in the poorer participants but not in wealthier participants. Mani et al., (2013) suggest that this is because money concerns for those who are in lower socioeconomic groups can drain mental resources, leaving less available for other tasks however this was not true in the present study.

Money priming and the support for government programmes

The first aim of this study was to investigate whether priming individuals with money would have an effect on their level of support for government goods and services. The results were positive. Our finding that money priming lowered the participants' support is consistent with previous research that thinking about money can affect people's attitudes about social policies and community help (Caruso et al., 2013). Previous research has shown that when people are reminded of money, their

decision becomes less moral-based and more result-based (Kouchaki, Smith-Crowe, Brief & Sousa, 2013). In other words, more emphasis is placed on those options which provide the best outcome for the individual rather than what may be considered the ideal for society. The more people are made aware of money, the more likely they are to take into account what they may be gaining or losing from a decision, before making a choice. As money is used widely as a means of exchange for goods and services, it is no surprise that those who have been primed with money are more likely to act in a "market-pricing" way. This means that decisions are based on cost-and-benefit analysis in terms of personal equity rather than emotion (Gasiorowska & Helka, 2012). With regard to the present study, when the concept of money was activated in the money primed participants, it was likely that the activation induced them to evaluate the programmes in a more business-like fashion, taking into account the cost and benefit of each government programme (Tenbrunsel & Messick, 1999). As the universal programmes benefit all members of the society equally, it is reasonable that priming had less impact on the participants' support for these programmes than for welfare programmes.

Zhou et al. (2009) showed that money priming could act as a substitute for social acceptance, leading people to make more self-based decisions as they became less concerned with seeking the approval of other people. If people are making decisions based on what is best for themselves rather than for the betterment of the society, they would be more likely to support things which they personally can gain from. Likewise, they would be unlikely to have a very high level of support for goods or services which they are unlikely to benefit from. The results from the current study are largely in line with the above reasoning. Our results show that the money primed participants, compared with those who had not been primed by money, had a lower

level of support for government goods and services, particularly the welfare related ones.

The results from the current study are also consistent with the self-sufficiency model (Vohs, Mead & Goode, 2006). As described in the introduction section, the model proposes that when people are reminded of money, they tend to act in a more socially insensitive way. The finding of Vohs and her colleagues that people who had been primed with money were less sensitive to the needs of other people is in line with the decreased level of support from the money primed group in the current study. A key concept of the self-sufficiency model is that when people are primed by money, they are more likely to act in a way which does not rely on help from others. Instead, they appear to prefer to achieve goals by themselves regardless of the increased effort which may be involved (Zhang, 2009). Although there are benefits for those who behave in accordance with the self-sufficiency model such as increased persistence and higher satisfaction when goals are reached, there are also negative social behaviours such as decreased helpfulness, less cooperation and less ethical decision making (Gasiorowska & Helka, 2012). With regard to the present experiment, increased self-sufficiency may account for why the money primed participants generally scored lower in the government goods and services survey, particularly in the welfare related items. If participants were evaluating the items in terms of the benefit they could gain rather than how it may benefit other people in need, scores may be lower if it did not benefit them personally as they would not gain anything from increasing their support.

Although the self-sufficiency model is an influential model, it is inconsistent with the findings by Kouchaki et al. (2013), who reported that priming by money causes people to adopt a business -based decision frame of mind rather than to behave

in a more self-sufficient way. In their experiment, Kouchaki et al. (2013) used a hiring scenario (based on Butterfield et al., 2000) to assess the effect of the money prime on unethical decisions. Participants completed a descrambling task with money related words (as used by Vohs et al., 2006). They were presented with a hiring situation in which they were to act as an employer recruiting a new employee with an interview. During the interview, the interviewee implied that if were hired they could give the company access to confidential information. Afterwards participants had to answer how likely they would be to hire the interviewee. Questions measured business decision frame, self sufficiency, competitive decision frame and power. Participants in the money condition were more likely to hire the candidate than those in the control condition. They found that money did not affect self-sufficiency and participants in the money condition were more likely to see the decision as a business decision.

The roles of socioeconomic position and gender in the support for government programmes

The present study also looked at whether the level of support for the government goods and services would be differentially influenced by priming based on an individual's socioeconomic position. Although there was no significant interaction between priming and socioeconomic position, numerically, the effect of priming was larger for the participants with a higher socioeconomic status than for those with a lower socioeconomic status. Support of welfare related programmes is known to vary greatly between different socioeconomic groups (Sidanius & Pratto, 1999). Perhaps a more sensitive measure than the one used in the present study would reveal the effect.

Having money is widely seen as an indicator of power, achievement and hard work (Hansen et al., 2013). Because of this, people tend to have varying opinions on welfare related systems. Social relationships can change when there is differing views of equity (Fiske, 1992). When people become more focussed on the input or output that concerns them in a situation, they have been shown to care less about the levels of equality amongst others in the situation. Those in a higher socioeconomic position may be less willing to contribute to equality in the society if they believe that their hard work is what has put them in a better position and attribute the financial difference between them and those less fortunate to the latter's lack of trying or laziness (Lea & Webley, 2006). This could explain the lower level of support for the welfare programmes from the participants in the higher socioeconomic group in the present study. Likewise, from the perspective of those in the low socioeconomic group, because they were more likely to benefit from the welfare programmes, it is reasonable that their support for the welfare programmes was much higher.

Caruso et al., (2013) found that presence of money in a higher socioeconomic class activates a preference for a free market system which favours the wealthy, creating more inequality between those with less money. When people were asked about economic equality, people stated that they preferred a society that was more equal. However when opinion was sought on the measures which would lead to more equality, people still preferred a "free-market" system in which the wealthy are advantaged and the lower socioeconomic group are unlikely to move out of this position. Although people may not admit to wanting differences in socioeconomic positions in a society, if each person acts in a self interested way and only supporting systems which benefit them, there will always be people in the lower as they may not have the support or means to help them out of it.

Gasiorowska and Helka (2012), Vohs et al (2006, 2008) found that when people were reminded of the concept of money they were less likely to be willing to share it with an anonymous partner. This can be related to the current study in terms of people who have been primed having lower levels of support for government welfare programmes if it benefits others but not themselves. When people are reminded of money and thus focus on their own self interest, they view situations on what they may benefit from it rather than how it may help other people and make decisions accordingly. This is similar to what the study by Pfeffer and DeVoe (2009) found. That when primed with money, people were less willing to volunteer both time and money to those less fortunate then themselves if they did not feel they were getting adequately personally compensated for doing so.

Gender was initially recorded in this experiment to maintain diversity amongst the participants. However once the data was analysed, the results showed that there was a significant effect of gender on the level of support towards government programmes ($p < 0.01$). Overall, males had a lower level of support for government programmes than females. Women generally place higher importance on helping others and social bonding than men, and females also score higher on scales measuring empathy (Einolf, 2011). Based on this, our result of females having higher support for government support programmes than males was to be expected. Despite Einolf (2011) concluding that women are more motivated to help others, it was also noted that gender differences vary across different locations based on the differences being social rather than biological.

The generality of the money priming effect

In the present study, the participants were all adults (no full-time students) with a large age range and different socioeconomic status. This demographic was

chosen due to the nature of the study, i.e., we were interested in the effect of money priming on people's support for government goods and services programmes, and a younger population might not be sufficiently familiar with these programmes. However, the effect of money priming is not restricted to adults. Experiments that used children as participants have also shown that the kids who were primed with money were less likely to engage in pro-social behaviours than their peers who were not primed with money (e.g., Gaisiorowska, Zaleskiewicz, & Wygrab, 2012; Roberts & Roberts, 2012). Gaisiorowska et al. found that in 5-8 year olds, children who were primed with the concept of money exhibited more selfish preferences and behaved in a less pro-social manner than those in the control group. For example, more children from the money primed group chose not to give their partner a sticker even though the reward for themselves would not differ if they did so. Roberts and Roberts (2012) had similar findings when they investigated money priming effects on willingness to give in 13-14 year olds. Those who were primed with money were less willing to donate and showed less support for charity giving. These results show that even from a young age, when people are reminded of money or some reward, they are more likely make more individual based decisions rather than thinking about the benefit for a larger group of people.

Money priming and real world implications

Although all the research mentioned so far has been related to findings from laboratory based studies, the results from the current study have implications for real world situations. Businesses may need to be aware that exposure to money could act as an environmental cue for employees to act in an unethical way, even though the influence may be unconscious (Kouchaki, et al., 2013). To remove this potentially

unwanted consequence when decisions are being made, it would be important not to activate the concept of money to prevent any potential effects that the exposure to money may encourage. Money also has the potential to change social relationships within a workplace. When the concept of money is activated, the increased sense of self could lead to less pro-social behaviours, which in turn could cause a decrease in teamwork and overall sense of community.

Previous research has shown that reminders of money may also influence work attitudes based on the perceived equality of one's income (Tang, Tang, & Homaifar, 2006), and this may decrease or increase the level of effort put into work. On the one hand, people reminded of their reimbursement for their time may put less effort in their work if they do not think that the benefit is worth the effort. On the other hand, being reminded of money could have positive effects on people by increasing their perseverance, drive for success and willingness to work if they think the reward from doing so will pay off for themselves (Duclos, Wen Wan & Jiang, 2013). These findings are consistent with the notion that money does have both positive and negative associations (Zelizer, 1989). As mentioned earlier, money priming could also influence consumer choices, making people more likely to purchase items based on their usefulness rather than the pleasure they bring to the purchaser (Tong et al., 2013). This finding may be useful for advertisers and marketers who want to promote different products to their audiences by focusing on what is presented to the consumers immediately prior to the introduction of the product. Perhaps it would be wise not to activate the concept of money if the goal was to encourage purchase per se.

The results from the current study may also have implications for government agencies seeking public opinions on social policies. If budgets or figures related to

money are mentioned prior to the announcement or voting on a welfare related policy, there may be unintended consequences in that the activation of the concept of money may encourage people to think in a self-interested way, and this in turn may lower the levels of support for the policy if does not benefit them personally.

Limitations of the present study

As with all research, the present study is not without its limitations. The first limitation is the sample size. Although 158 participants were recruited, by the time they were divided into four groups, sample size for each group became relatively small. This could contribute to the non-significant interaction between priming and socioeconomic status.

The second limitation is that the participants were all recruited within New Zealand, which has a Western culture. It is unclear whether the results found in the present study would generalize to other cultures. Most studies on the effects of money priming have been done in modern Western countries which are all largely based on a money trade market in everyday life. Caruso et al. (2013) found that the participants who were primed with money increased the preference for a free-market system and that this effect was moderated by the participants' nationality. It would be interesting to see whether the same findings would exist if the experiment was repeated in less developed countries where trade still occurs but the focus on money and material values is not as high.

A third limitation concerns the internal consistency with regard to the universal questions. The Cronbach's alpha on the welfare related questions was 0.91, indicating good internal consistency and suggesting that the questions were a good measure of the same construct. On the universal questions, the Cronbach's alpha was lower at 0.65. If this experiment was to be repeated, certain questions may need to be

modified or removed to bring the internal consistency up to what is usually considered an acceptable level at above 0.7.

The final potential limitation is the use of the NZiDep scale as a broad measure of socioeconomic status. Although the scale is considered a validated measure of socioeconomic deprivation, there are no short measures such as this which can capture everything about every individual's socioeconomic position within a population (Salmond et al., 2006). Because the scale is focused on the lower socioeconomic positions by measuring the number of deprivations, it is unclear how good a measure the scale is when it is used to divide people into high and low socioeconomic groups. Despite this potential limitation, we chose to use the NZiDep scale for the following reasons. To accurately measure someone's socioeconomic position, I would need to collect a lot of personal information, which would be both time consuming and difficult to do in light of the scale of the project and the time I had for completing the project. Given the nature of the project, the NZiDep scale was considered an appropriate tool to measure the socioeconomic positions of the New Zealand based participants.

Summary

Money has been shown to have an impact on people's behaviour in both negative and positive ways. The experiment reported in this thesis provided converging evidence to the findings of prior research in that the activation of the concept of money causes people to act in a less pro-social way, perhaps due to an increase in self-sufficiency. Whilst self-sufficiency can be viewed as both a positive and negative effect depending on the circumstances, the results of this experiment indicates that in terms of support for government goods and services programmes,

people who had been primed with money are more likely to make decisions less favourable for the people in need.

The present study also investigated whether the effect of money on the support of government programmes would interact with people's socioeconomic position. Although no significant interaction was found, there was a trend in the right direction. The effect of money priming was numerically larger in the high than the low socioeconomic group. Despite the lack of a significant interaction, there was a higher level of support for the government programmes amongst the lower socioeconomic group compared with the higher socioeconomic group, presumably because the former group was most likely to benefit from these welfare support programmes.

The results of this study have added evidence to the research that money priming can have an effect on people's attitudes towards government support programmes which can benefit themselves or others in their community. However, there is also plenty of room for further research into how a basic activation of the money concept can influence personal and social attitudes and behaviours by an individual within a variety of possible situations.

References

Baumeister, R. F.; Bratslavsky, E.; Muraven, M.; Tice, D. M. (1998). "Ego depletion: Is the active self a limited resource?". *Journal of Personality and Social Psychology*, 74 (5), pp. 1252–1265.

Baumeister, R.F., Sparks, E.A., Stillman, T.F., & Vohs, K.D. (2008). Free will in consumer behavior: Self-control, ego depletion, and choice. *Journal of Consumer Psychology, 18*, pp. 4-13.

Berkowitz, L., & Friedman, P. (1967). Some social class differences in helping behaviour. *Journal of Personality and Social Psychology, 5*(2), pp. 217-225.

Bonini, N., Biel, A., Galing, T., & Karlsson, N. (2002). Influencing what the money is perceived to be worth: Framing and priming in contingent valuation studies. *Journal of Economic Psychology, 23*, pp. 655–663.

Boucher, H., & Kofos, M. (2012). The idea of money counteracts ego depletion effects. *Journal of Experimental Social Psychology, 48*, pp. 804–810.

Bullock, H.E., Williams, W.R., & Limbert, W.M. (2003). Predicting Support for Welfare Policies: The Impact of Attributions and Beliefs About Inequality. *Journal of Poverty, 7*(3), pp. 35-56.

Butterfield, K. D., Treviño, L. K., & Weaver, G. R. (2000). Moral awareness in business organizations: Influences of issue-related and social context factors. *Human Relations, 53*, pp. 981–1018.

Caruso, E.M., Vohs, K.D., Baxter, B., & Waytz, A. (2013). Mere Exposure to Money Increases Endorsement of Free-Market Systems and Social Inequality. *Journal of Experimental Psychology, 142*(2), pp. 301-306.

Cohen, J. (1992). A Power Primer. *Psychological Bulletin, 112*(1), pp. 155-159.

Dijksterhuis, A. (2004). Think Different: The Merits of Unconscious Thought in Preference Development and Decision Making. *Journal of Personality and Social Psychology, 87*(5), pp. 586-598.

Duclos, R., Wen Wan, E., & Jiang, Y. (2013). Show Me the Honey! Effects of Social Exclusion on Financial Risk-Taking. *Journal of Consumer Research, 40*(1), pp. 122-135.

Dunn, E.W., Aknin, L.B., & Norton, M.I. (2008). Spending Money on Others Promotes Happiness. *Science- New Series, 319*(5870), pp. 1687-1688.

Einolf, C.J. (2011). Gender differences in the correlates of volunteering and charitable giving. *Non-profit and Voluntary Sector Quarterly, 40*(6), pp. 1092 – 1112.

Fiske, A.P. (1991). *Structures of social life: The four elementary forms of human relations.* New York, NY: Free Press.

Frank, R.H., Gilovich, T., & Regan, D.T. (1993). The evolution of one-shot cooperation: An experiment. *Ethology and Sociobiology, 14*(4), pp. 247-256.

Gąsiorowska, A., & Hełka., A.M. (2012). Psychological consequences of money and money attitudes in dictator game. *Polish Psychological Bulletin, 43(*1), pp. 20-26.

Gasiorowskaa, A., Zaleskiewicz, T., & Wygrabb, S. (2012). Would you do something for me? The effects of money activation on social preferences and social behavior in young children. *Journal of Economic Psychology, 33*, pp. 603–608.

Gino, F., & Pierce, L. (2009). The abundance effect: Unethical behavior in the presence of wealth. *Organizational Behavior and Human Decision Processes, 109*, pp. 142–155.

Guéguen, N., & Jacob, C. (2013). Behavioral consequences of money: When the automated teller machine reduces helping behavior. *The Journal of Socio-Economics, 47*, pp. 103 -104.

Han, S., Lerner, J.S., & Keltner, D.(2007).Feelings and Consumer Decision Making: The Appraisal-Tendency Framework. *Journal of Consumer Psychology , 17* (3), pp. 158-168.

Hansen, J., Kutzner, F., & Wänke, M. (2013). Money and Thinking: Reminders of Money Trigger Abstract Construal and Shape Consumer Judgments. *Journal of Consumer Research, 39*(6), pp. 1154-1166.

Hastie, R. (2001). Problems for Judgement and Decision Making. *Annual Review of Psychology, 52*, pp. 653-668.

Kouchaki, M., Smith-Crowe, K., Brief, A.P., & Sousa, C. (2013). Seeing green: Mere exposure to money triggers a business decision frame and unethical outcomes. *Organizational Behavior and Human Decision Processes , 121*, pp. 53–61.

Lea, S., & Webley, P. (2006). Money as tool, money as drug: The biological psychology of a strong incentive. *Behavioral and Brain Sciences, 29,* pp. 161-209.

Loewenstein, G., & Lerner, J.S. (2003). The Role of Affect in Decision Making. In R. Davidson, K. Scherer, & H. Goldsmith (Eds.), *Handbook of Affective Sciences.* (pp. 619-642). Oxford: Oxford University Press.

Lynch J, Kaplan G. Socioeconomic position. In: Berkman L, Kawachi I, editors. Social epidemiology. Oxford: Oxford University Press; 2000.

Macrae, C.N., Bodenhausen, G.V., Milne, A.B., & Jetten, J. (1994). Out of Mind but Back in Sight: Stereotypes on the Rebound. *Journal of Personality and Social Psychology, 67*(5), pp. 808-817.

Mani, A., Mullainathan, S., Shafir, E & Zhao, J. (2013). Poverty impedes cognitive function. *Science, 341*, pp. 976 – 980.

Mishra, H., Mishra, A., & Nayakankuppam, D. (2006). Money: A Bias for the Whole. *Journal of Consumer Research, 32(*4), pp. 541-549.

Mishkin, F.S. (1992). *The economics of money, banking and financial markets*, 3rd edition. Harper Collins.

Mogilner, C. (2010). The pursuit of happiness: time, money, and social connections. *Psychological Science, 21*(9), pp. 1348 – 1354.

Murphy, S.T., & Zajonc, R. B. (1993). Affect, cognition, and awareness: Affective priming with optimal and suboptimal stimulus exposures. *Journal of Personality and Social Psychology, 64(*5), pp. 723-739.

Oorschot, W. (2000). Who should get what, and why? On deservingness criteria and the conditionality of solidarity among the public. *Policy & Politics, 28*(1), pp. 33-48.

Pfeffer, J., & DeVoe, S. (2009). Economic evaluation: The effect of money and economics on attitudes about volunteering. *Journal of Economic Psychology 30*, pp. 500–508.

Piff, P.K., Kraus, M.W., Côté, S., Cheng, B.H., & Keltner, D. (2010). Having less, giving more: The influence of social class on prosocial behavior. *Journal of Personality and Social Psychology*, *99*(5), pp. 771-784.

Pratto, F., Sidanius,J., Stallworth, L.M., & Malle, B.F. (1994). Social dominance orientation: A personality variable predicting social and political attitudes. *Journal of Personality and Social Psychology*, *67(*4), pp. 741-763

Price, R., Choi, J., & Vinokur, A. (2002). Links in the Chain of Adversity Following Job Loss: How Financial Strain and Loss of Personal Control Lead to Depression, Impaired Functioning, and Poor Health. *Journal of Occupational Health Psychology, 7*(4), pp. 302-312.

Roberts, J.A., & Roberts, C.R. (2012). Money matters: does the symbolic presence of money affect charitable giving and attitudes among adolescents?. *Young Consumers, 13*(4), pp. 329-336.

Salmond, C., & Crampton, P. (2012). Measuring socioeconomic position in New Zealand. *Journal of Primary Health Care, 4*(4), pp. 271-280.

Salmond, C., Crampton, P., King, P., & Waldegrave, C. (2006). NZiDep: A New Zealand index of socioeconomic deprivation for individuals. *Social Science & Medicine, 62,* pp. 1474-1485.

Schwartz, S.H. (1992). Universals in the content and structure of values: Theoretical advances and empirical tests in 20 countries. *Advances in Experimental Social Psychology, 25*, pp. 1-65

Shi, Y., Xianglong, Z., Wang, C., Chen, H., & Xiangping, L. (2013). Money-primed reactance does not help ensure autonomy. *Social Behavior and Personality, 41*(8), pp. 1233-1244.

Smith, K.B., & Stone, L. (1989). Rags, riches, and bootstraps: Beliefs about the causes of wealth and poverty. *The Sociological Quarterly, 30*, pp. 93-107.

Srivastava, A., Locke, E.A., & Bartol, K.M. (2001). Money and subjective well-being: It's not the money, it's the motives. *Journal of Personality and Social Psychology, 80*(6), pp. 959-971.

Srull, T., & Wyer, R. (1979). The role of category accessibility in the interpretation of information about persons: Some determinants and implications. *Journal of Personality and Social Psychology, 37*(10), pp. 1660-1672.

Tang, T. L. P., Tang, T. L.-N., & Homaifar, B. Y. (2006). Income, the love of money, pay comparison, and pay satisfaction: Race and gender as moderators. *Journal of Managerial Psychology, 21*(5), pp. 476–491.

Tong, L., Zheng, Y., & Zhao, P. (2013). Is money really the root of all evil? The impact of priming money on consumer choice. *Marketing Letters: A Journal of Research Marketing, 24*(2), pp. 119-129.

Tulving, E., & Schacter, D.L. (1990). Priming and Human Memory Systems. *Science, 247,* pp. 302-306.

Vohs, K., Mead, N., & Goode, M. (2008). Merely Activating the Concept of Money Changes Personal and Interpersonal Behavior. *Current Directions in Psychological Science, 17*(3), pp. 209-213.

Vohs, K., Mead, N., & Goode, M. (2006). The Psychological Consequences of Money. *Science, New Series, 314*(5802), pp. 1154-1156.

Verplanken, B., & Holland, R. (2002). Motivated decision making: Effects of activation and self-centrality of values on choices and behavior. *Journal of Personality and Social Psychology, 82*(3), pp. 434-447.

Weber, E.U., & Johnson, E.J. (2009). Mindful Judgment and Decision Making. *Annual Review of Psychology, 60,* pp. 53-85.

Yezer, A.M., Goldfarb, R.S., & Poppen, P. (1996). Does studying economics discourage cooperation? Watch what we do, not what we say or how we play. *Journal of Economic Perspectives, 10*(1), pp. 177-186.

Zelizer, V. (1989). The Social Meaning of Money: "Special Monies". *American Journal of Sociology, 95*(2), pp. 342-377.

Zhang, L. (2009). An Exchange Theory of Money and Self-Esteem in Decision Making. *Review of General Psychology, 13*(1), pp. 66-76.

Zhou, X., Vohs, K.D., & Baumeister, R.F. (2008). The Symbolic Power of Money: Reminders of Money Alter Social Distress and Physical Pain. *Psychological Science, 20* (6), pp. 700-706.

Appendix A

List of words included in the memory task for the money primed group

gold	bonus	withdraw	pay	wage	assets
borrow	treasure	bill	grant	bank	deposit
instalments	wealth	account	refund	donation	bank
interest	possession	earnings	cheque	savings	shares
mortgage	valuable	expense	gain	cost	fortune
cash	inheritance	investment	income	capital	currency

List of words included in the memory task for the control group

machine	end	chess	tiger	passport	phone
science	beard	leader	computer	cat	leaves
tooth	eating	cheese	garden	chief	news
research	sky	coat	river	bike	bottle
summer	wolf	woman	cheese	paper	flower
football	town	office	tissue	rain	ice

Appendix B

Government Goods and Service Survey for all participants

Please circle the number which matches your opinion for each of the questions

0=Not at all vital for the government to provide

10= Really vital for the government to provide

Unemployment benefit

0 1 2 3 4 5 6 7 8 9 10

Newspapers

0 1 2 3 4 5 6 7 8 9 10

Disability allowance

0 1 2 3 4 5 6 7 8 9 10

Universities

0 1 2 3 4 5 6 7 8 9 10

Sickness benefit

0 1 2 3 4 5 6 7 8 9 10

Hospitals

0 1 2 3 4 5 6 7 8 9 10

Fire service

0 1 2 3 4 5 6 7 8 9 10

Invalid’s benefit

0 1 2 3 4 5 6 7 8 9 10

Domestic purposes benefit

0 1 2 3 4 5 6 7 8 9 10

Primary & secondary schools

0 1 2 3 4 5 6 7 8 9 10

Accommodation supplement payments for single parents

0 1 2 3 4 5 6 7 8 9 10

Defence Force

0 1 2 3 4 5 6 7 8 9 10

Widow’s benefit

0 1 2 3 4 5 6 7 8 9 10

New Zealand Symphony Orchestra

0 1 2 3 4 5 6 7 8 9 10

Pensions for those over 65

0 1 2 3 4 5 6 7 8 9 10

Water distribution

0 1 2 3 4 5 6 7 8 9 10